AMENDMENT TO THE CLAIMS

1. (Currently Amended) ~~A method for merging data, the method comprising the steps of:~~
~~receiving input data for merging;~~
~~defining one or more transformations of the input data;~~
~~defining a partition of the input data;~~
~~applying admissible geometrization to the one or more transforms of the input data and the partition of the input data;~~
~~producing at least an admissible transformation of the input data; and~~
~~merging the input data using at least the admissible transformation of the input data~~A data scaling method comprising the steps of:
(a) receiving data;
(b) forming two partitions of the received data;
(c) applying admissible geometrization to the doubly partitioned received data to produce admissibly transformed data; and
(d) interpreting the admissibly transformed data as scaled data.

2. (New) The data scaling method of claim 1 wherein the received data comprises one or more scale types.

3. (New) The data scaling method of claim 1 wherein step (b) further comprises the steps of:
(b1) creating one or more data structures from the partitioned received data; and
(b2) associating a scale type to each subset of a partition of the received data.

4. (New) The data scaling method of claim 3 wherein in step (b2) the scale types associated to each subset of the partition correspond to scale types from the received data.

5. (New) The data scaling method of claim 3 wherein in step (b1) one or more of the data structures contain one or more elements selected from the group consisting of missing values and augmenting values.

6. (New) The data scaling method of claim 3 wherein in step (b1) the one or more data structures comprise one or more complete graphs.

7. (New) The data scaling method of claim 6 further comprising mapping the received data to edge weights of the one or more complete graphs

8. (New) The data scaling method of claim 3 wherein in step (b1) the one or more data structures comprise one or more symmetric matrices.

9. (New) The data scaling method of claim 8 further comprising direct substitution of the received data into the one or more symmetric matrices.

10. (New) The data scaling method of claim 8 wherein the symmetric matrices are selected from the group consisting of ideal node matrices and hybrid matrices.

11. (New) The data scaling method of claim 8 wherein the symmetric matrices are hollow symmetric matrices.

12. (New) The data scaling method of claim 1 wherein step (c) comprises applying 2-partition individual differences multidimensional scaling to the doubly partitioned received data.

13. (New) The data scaling method of claim 12 further comprising the steps of:
creating proximity weights; and
applying 2-partition individual differences multidimensional scaling using the proximity weights.

14. (New) The data scaling method of claim 12 further comprising the steps of:
applying 2-partition individual differences multidimensional scaling over a plurality of dimensions;
producing admissibly transformed data for each of the plurality of dimensions;
merging the admissibly transformed data from the plurality of dimensions; and
interpreting the merged admissibly transformed data as scaled data.

15. (New) The data scaling method of claim 12 wherein the admissibly transformed data are pseudo-distances or disparities.

16. (New) The method for admissibly classifying data of claim 1 wherein step (c) further comprises the step of:
forming commensurate admissibly transformed data.

17. (New) The data scaling method of claim 1 further comprising combining the received data and the admissibly transformed data values to produce a scale conversion model.

18. (New) The data scaling method of claim 1 wherein the received data comprises preference data for a predetermined characteristic among a plurality of input domains.

19. (New) A data scaling method comprising the steps of:
(a) receiving data;
(b) partitioning the received data;
(c) forming one or more symmetric matrices from the partitioned received data;
(d) forming a second partition of the received data;
(e) associating a scale type to each subset of the second partition of the received data;
(f) applying admissible geometrization to the doubly partitioned received data to produce admissibly transformed data; and
(g) interpreting the admissibly transformed data as scaled data.

20. (New) The data scaling method of claim 19 wherein the received data comprises one or more scale types said scale types forming the scale types of the subsets of the second partition of the received data.

21. (New) The data scaling method of claim 19 wherein step (c) further comprises forming the one or more symmetric matrices using direct substitution of the received data into the symmetric matrices.

22. (New) The data scaling method of claim 19 wherein the one or more symmetric matrices of step (c) further comprise one or more hollow symmetric matrices.

23. (New) The data scaling method of claim 19 wherein step (f) comprises applying 2-partition individual difference multidimensional scaling to the doubly partitioned received data.

24. (New) The data scaling method of claim 19 further comprising resampling over a plurality of rearrangements of the received data.

25. (New) A data scaling method comprising the steps of:
(a) receiving data;
(b) creating a plurality of rearrangements of the received data;
(c) applying admissible geometrization to each of the plurality of rearrangements of the received data to produce a plurality of sets of admissibly transformed data;
(d) merging the plurality of sets of admissibly transformed data; and
(e) interpreting the merged data as scaled data.

26. (New) Computer executable software program code stored on a computer readable medium, the code for scaling input data, the code comprising:
first code that receives data and forms one or more data structures using the received data; and

second code that applies an admissible geometrization process to the one or more data structures and produces admissible transformations of the input data to provide user output information.

27. (New) A method for admissibly merging data comprising the steps of:
(a) receiving data;
(b) forming two partitions of the received data;
(c) applying admissible geometrization to the doubly partitioned received data to produce admissibly transformed data; and
(d) processing the admissibly transformed data to provide merged data.

28. (New) The method for admissibly merging data of claim 27 wherein the received data comprises one or more scale types.

29. (New) The method for admissibly merging data of claim 27 wherein step (b) further comprises the steps of:
(b1) creating one or more data structures from the partitioned received data; and
(b2) associating a scale type to each subset of a partition of the received data.

30. (New) The method for admissibly merging data of claim 29 wherein in step (b2) the scale types associated to each subset of the partition of the received data correspond to scale types from the received data.

31. (New) The method for admissibly merging data of claim 29 wherein in step (b1) one or more of the data structures contain one or more elements selected from the group consisting of missing values and augmenting values.

32. (New) The method for admissibly merging data of claim 29 wherein in step (b1) the one or more data structures comprise one or more complete graphs.

33. (New) The method for admissibly merging data of claim 32 further comprising mapping the received data to edge weights of the one or more complete graphs

34. (New) The method for admissibly merging data of claim 29 wherein in step (b1) the one or more data structures comprise one or more symmetric matrices.

35. (New) The method for admissibly merging data of claim 34 further comprising direct substitution of the received data into the one or more symmetric matrices.

36. (New) The method for admissibly merging data of claim 34 wherein the symmetric matrices are selected from the group consisting of ideal node matrices and hybrid matrices.

37. (New) The method for admissibly merging data of claim 34 wherein the symmetric matrices are hollow symmetric matrices.

38. (New) The method for admissibly merging data of claim 27 wherein step (c) comprises applying 2-partition individual differences multidimensional scaling to the doubly partitioned received data.

39. (New) The method for admissibly merging data of claim 38 further comprising the steps of:
creating proximity weights; and
applying 2-partition individual differences multidimensional scaling using the proximity weights.

40. (New) The method for admissibly merging data of claim 38 further comprising the steps of:
applying 2-partition individual differences multidimensional scaling over a plurality of dimensions;
producing admissibly transformed data for each of the plurality of dimensions;

merging the admissibly transformed data from the plurality of dimensions; and processing the merged admissibly transformed data to provide merged data.

41. (New) The method for admissibly merging data of claim 38 wherein the admissibly transformed data values are pseudo-distances or disparities.

42. (New) The method for admissibly classifying data of claim 27 wherein step (c) further comprises the step of:
forming commensurate admissibly transformed data.

43. (New) The method for admissibly merging data of claim 27 wherein the received data is comprised of preference data for a predetermined characteristic among a plurality of input domains.

44. (New) A data merging method comprising the steps of:
(a) receiving data;
(b) creating a plurality of rearrangements of the received data;
(c) applying admissible geometrization to each of the plurality of rearrangements of the received data to produce a plurality of sets of admissibly transformed data;
(d) merging the plurality of sets of admissibly transformed data; and
(e) processing the merged admissibly transformed data to provide merged data.

45. (New) A data scaling method comprising the steps of:
(a) receiving intermixed scale type data;
(b) applying admissible geometrization to the received intermixed scale type data to produce admissibly transformed data; and
(c) interpreting the admissibly transformed data as scaled data.

46. (New) The data scaling method of claim 45 wherein step (b) further comprises the step of:
forming two partitions of the received intermixed scale type data.

47. (New) A data scaling method comprising the steps of:

(a) receiving intermixed scale type data;

(b) forming two partitions of the received intermixed scale type data;

(c) applying admissible geometrization to the doubly partitioned received intermixed scale type data to produce admissibly transformed data; and

(d) interpreting the admissibly transformed data as scaled data.

48. (New) A data scaling method comprising the steps of:

(a) receiving intermixed scale type data;

(b) partitioning the received intermixed scale type data;

(c) forming one or more symmetric matrices from the partitioned received data;

(d) forming a second partition of the received data;

(e) associating a scale type to each subset of the second partition of the received data;

(f) applying admissible geometrization to the doubly partitioned received data to produce admissibly transformed data; and

(g) interpreting the admissibly transformed data as scaled data.

49. (New) The data scaling method of claim 48 wherein the one or more symmetric matrices of step (c) further comprise hollow symmetric matrices.

50. (New) The data scaling method of claim 48 wherein step (f) comprises applying 2-partition individual differences multidimensional scaling to the doubly partitioned received data.

51. (New) A method for admissibly merging data comprising the steps of:

(a) receiving intermixed scale type data;

(b) applying admissible geometrization to the received intermixed scale type data to produce admissibly transformed data; and

(c) processing the admissibly transformed data to provide merged data.

52. (New) The method for admissibly merging data of claim 51 wherein step (b) further comprises the step of:
forming two partitions of the received intermixed scale type data.

53. (New) A method for admissibly merging data comprising the steps of:
(a) receiving intermixed scale type data;
(b) forming two partitions of the received intermixed scale type data;
(c) applying admissible geometrization to the doubly partitioned received intermixed scale type data to produce admissibly transformed data; and
(d) processing the admissibly transformed data to provide merged data.

54. (New) A method for admissibly merging data comprising the steps of:
(a) receiving intermixed scale type data;
(b) partitioning the received intermixed scale type data;
(c) forming one or more symmetric matrices from the partitioned received data;
(d) forming a second partition of the received data;
(e) associating a scale type to each subset of the second partition of the received data;
(f) applying admissible geometrization to the doubly partitioned received data to produce admissibly transformed data; and
(g) processing the admissibly transformed data to provide merged data.

55. (New) The method for admissibly merging data of claim 54 wherein the one or more symmetric matrices of step (c) further comprise hollow symmetric matrices.

56. (New) The method for admissibly merging data of claim 54 wherein step (f) comprises applying 2-partition individual differences multidimensional scaling to the doubly partitioned received data.

57. (New) A method for admissibly prioritizing preference data comprising the steps of:
(a) receiving preference data;

(b) forming two partitions of the received preference data;

(c) applying admissible geometrization to the received preference data to produce admissibly transformed data; and

(d) processing the admissibly transformed data to provide priorities.

58. (New) The method for admissibly prioritizing preference data of claim 57 wherein step (b) comprises applying 2-partition individual differences multidimensional scaling to the received preference data.